McGraw-Hill Economics

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30th ANNUAL McGRAW-HILL FALL SURVEY OF PRELIMINARY PLANS FOR NEW PLANTS AND EQUIPMENT, 1983-85

Sparked by economic recovery, capital spending has caught fire in 1983. Nonetheless, according to McGraw-Hill's fall survey of spending plans, business is somewhat cautious about buying new plant and equipment in 1984.

The survey found that U.S. business intends to hike new plant and equipment outlays 9.4% next year to $333.38 billion (Table I). That compares well with an estimated 3.7% cut in capital spending in 1983. But given rapid spending advances since last spring, a 9.4% year-over-year increase does not allow for sustained robust growth from now until the end of 1984.

What's more, survey respondents expect capital goods prices to rise 5.8% next year (Table II), which cuts their "real" projected growth in spending to 3.4%. Real growth of 3.4% in 1984 sounds good compared to a drop of some 2.5% in 1983. But once again, this projection leaves little room for growth through the next four quarters.

More encouraging, two-thirds of respondents expect the overall U.S. economy to grow rapidly next year (Table V), and manufacturers expect inflation-adjusted sales to spurt a hefty 7.3% (Table IV). If these expectations materialize, capital budgets could get boosted as 1984 progresses.

Inflation-adjusted spending could also be higher next year if all dollars currently budgeted are spent, but if inflation comes in lower

than 5.8%. If 1984 capital goods inflation is 2%-3%, which is very possible, then a 9.4% increase in outlays would translate into a 6%-7% real advance in new plant and equipment expenditures.

The McGraw-Hill survey was conducted in September and October. Results are based on responses of 534 companies that do more than a third of all capital spending in the U.S (Table VIII). Dollar figures reported in the survey are "blown up" to represent spending by all U.S. companies.

1984 Could Be Better than the Survey Says

Buoyed by rapid increases in sales and profits, business has wasted little time in boosting capital outlays. Investment began from such a low level early in the year, however, that 1983 as a whole will be down about 3.7% from 1982.

By contrast, the survey projects that business investment in new plant and equipment will spurt 9.4% in 1984. At first blush that seems a sizable improvement from 1983. The rain on this parade is that the projection doesn't leave much scope for gains as 1984 progresses.

This assertion is made clearer by reference to Chart I. While the survey does not ask respondents to report quarterly investment intentions, Chart I shows a reasonable pattern based on the survey's yearly projections.

Note in the first set of data that 9.4% growth in 1984 versus 1983 implies fairly slow growth through 1984. Note in the second set of data that if 1984 capital goods inflation is 5.8%, then real 1984 spending growth of 3.4% actually means declines in 1984 on a quarterly basis. (The projections for 1984 are simply trended out, but no matter

Chart I. If the Survey is Right, 1984 Presents Problems

Plant & Equipment Spending	1983 1Q	1983 2Q	1983 3Q	1983 4Q	1984 1Q	1984 2Q	1984 3Q	1984 4Q	1983	1984
Billion $	293	296	309	322	328	333	335	338	304.7	333.4
% Change	-12.8	4.2	18.7	17.9	7.7	6.2	2.4	3.6	-3.7	9.4
Billion 1972 $	140	143	148	155	153	152	151	150	146.5	151.5
% Change (5.8% inflation)	-9.7	8.9	14.7	20.3	-5.1	-2.6	-2.6	-2.6	-2.5	3.4
Billion 1972 $	140	143	148	155	156	157	158	158	146.5	157.2
% Change (2% inflation)	-9.7	8.9	14.7	20.3	2.6	2.6	2.6	0	-2.5	7.3

NOTE: Data seasonally adjusted at annual rate.

what the pattern in 1984, the survey suggests a downturn at some point next year.)

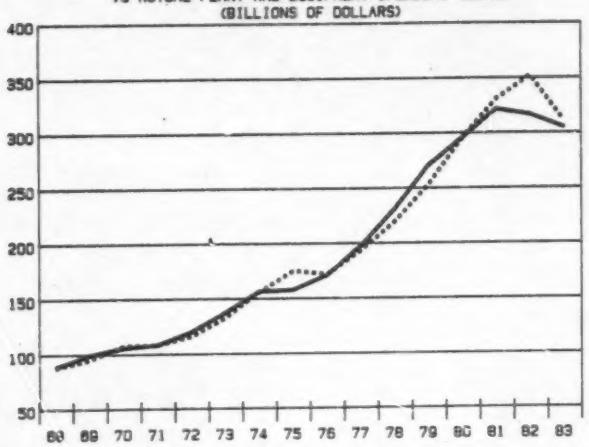
Yet because economic growth is the key force that drives capital investment, because the economy has been growing snappily for much of 1983, and since the recovery promises to carry though 1984, an investment decline in one or more quarters next year seems unlikely.

If, on the other hand, the survey's 9.4% projection of nominal capital spending is realistic, but if 2% capital goods inflation is more likely than 5.8%, something like the last set of projections in Chart I would result. In this case, capital investment growth would continue through next year, albeit at a modest pace. Despite a 1984 slowdown, real capital spending in this scenario would still end up nearly 11% greater in 1984's fourth quarter than it was at the bottom of recession in 1982's fourth quarter. By contrast, eight quarters after the 1973-75 recession ended, real plant and equipment spending was up less than 5%. In fact, even if the projection of 3.4% real investment

growth in 1984 is correct, the recovery in plant and equipment outlays would about match the 1975-77 record.

While the survey's projection of 5.8% inflation seems a bit pessimistic, the projection of a 9.4% hike in outlays may be a little on the pessimistic side, too. For in periods when capital spending is rising rapidly, the survey tends to undershoot, as illustrated in Figure 1. In 1972, for example, the survey projected a 6.9% increase in

FIGURE 1
SURVEY FORECAST (DASH)
VS ACTUAL PLANT AND EQUIPMENT SPENDING (LINE)
(BILLIONS OF DOLLARS)



new plant and equipment expenditures; the outcome was 10.7%. And in 1977, when spending jumped 15.5%, the survey projected 13%. The point here is that in terms of the business cycle, 1972 and 1977 are somewhat comparable to 1984. Given past behavior of the survey, therefo , a projection of 9.4% growth in plant and equipment spending for 1984 could be too low.

By extension, a 3.4% projection of real spending growth would also be too low, even with the survey's 5.8% inflation forecast. Nominal

spending growth of, say, 11.5% combined with 5.8% capital goods inflation would produce real spending growth in 1984 of 5.4%.

Wobbly Balance Sheets Could Pose a Roadblock

If inflation-adjusted investment does score only a 3%-4% gain next year, it will likely be due to financial constraints, as summarized in Chart II. While cash flow has been growing strongly and should continue

Chart II. Financial Indicators of Capital Spending Strength

	----1982----		-------1983-------			-------Annual-----		
	3Q	4Q	1Q	2Q	3Q	1981	1982	1975
Interest Rate on High-Quality Corporate Bonds (%)	13.8	11.9	11.8	11.6	12.4	14.2	13.8	9.5
Gross Corporate Internal Funds (Billion $, SAAR)	234.6	227.3	225.5	235.6	255.3	238.7	232.2	122.4
Internal Funds/Capital Expenditures	.685	.674	.679	.701	.733	.690	.667	.776
Debt/Equity Ratio	4.21	4.12	4.03	3.97	3.94	3.71	4.13	2.114
Short-Term Liabilities/Long-Term Liabilities	.50	.49	.49	.48	.48	.47	.49	.41
Interest Expense/Internal Funds	.728	.717	.721	.689	.646	.634	.735	.465

NOTE: Data are for nonfinancial corporations.
SAAR - Seasonally adjusted annual rate

strong, other indicators point to financial shakiness. Balance sheets, even though on the mend, are still too weighed down with debt, particularly short-term debt. Interest payments still take up too much of companies' cash flow. And though interest payments are declining, interest rates remain extremely high. Thus proposed capital projects

have to promise a very healthy rate of return to justify borrowing long-term money at 12% or more.

In the early stages of the recovery, however, high interest rates have not stopped a robust comeback in capital spending. Companies may have decided to finance projects primarily out of rising internal funds. Or they may have decided that investments in modern equipment must be made now in order to compete effectively later on--no matter what the cost of money.

Thus, while unfavorable financial conditions will probably constrain capital spending in 1984--especially long-term projects like new factories--that constraint doesn't seem strong enough to cause real declines in outlays as 1984 progresses. That's especially true in view of the fact that many companies are currently revising 1984 spending plans. Given the economy's vigor, the bet is that plans will be revised upward.

Autos in the Driver's Seat

Next year's primary source of capital spending strength, according to the survey, will come from manufacturers of durable goods. And the driving force in durables will be the autos, trucks, and parts industry, which plans to jack up 1984 capital outlays by 49.2%.

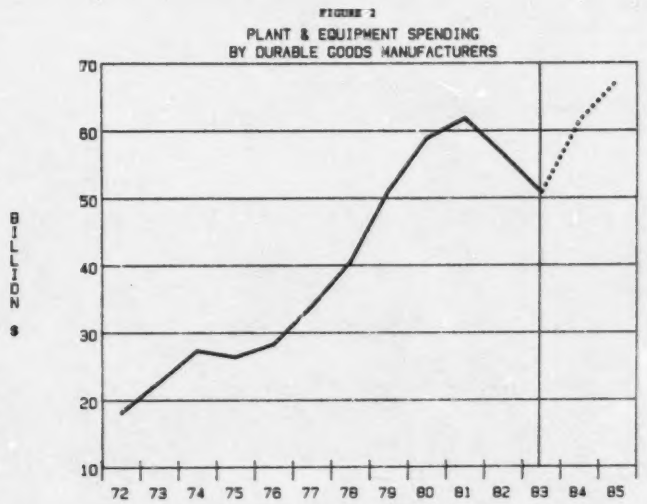
The bad news is that producers of motor vehicles cut capital outlays an estimated 13.5% in 1983 after slashing them 21.4% in 1982. Given that auto sales have roared down the track in the past year the industry's sharp investment cutback in 1983 may seem surprising. One possibility is that too often faced with overly rosy sales forecasts, auto executives decided to wait to see whether the 1983 recovery was for

real. By the time they decided it was, plant and equipment modernization plans originally set for 1983 had been shifted to 1984.

Reflecting the 1983 recovery in autos and other big-ticket consumer products, makers of steel, nonferrous metals, and "other" durables also plan large investment increases next year.

Meanwhile, the high-tech electrical machinery and instruments industries--which weathered the recession much better than did basic industries--continued to lift investment in 1983, and they plan substantial increases in 1984.

In general, at this early stage in planning for 1985, durables makers figure to boost capital budgets more than industries in the nondurables and nonmanufacturing sectors. Hence plant and equipment spending by durable goods producers seem firmly on an upward course, as shown in Figure 2. Because this sector got hit particularly



hard by the 1981-82 recession, however, the planned 1984 investment surge will not lift outlays back to the level they reached in 1981.

Why spending in the durables sectors fell in 1983 is suggested by Chart III. Even with recovery taking hold, many industries continued to suffer profits declines and depressed sales. And not one durable goods industry enjoyed an operating rate above 80% as of 1983's third quarter.

Chart III. Despite Recovery, Manufacturers are Far from Healthy

	% Change from Year Ago Sales*	Profits*	Operating** Rate (%)
Iron & Steel	-8.1%	loss	64.0
Nonferrous Metals	10.9	-15.3%	74.5
Electrical Machinery	7.6	-26.2	77.9
Non-Electrical Machinery	-4.8	-19.0	71.3
Autos, Trucks & Parts	17.5	101.8	76.9
Aerospace	10.9	41.4	NA
Fabricated Metals	0.3	-5.3	70.3
Instruments	-2.5	-16.1	76.9
Stone, Clay & Glass	9.1	106.1	75.5
Other Durables	18.1	62.8	78.5
Chemicals	6.1	7.9	76.3
Paper & Pulp	7.8	24.5	93.9
Rubber & Plastic	0.4	22.3	93.3
Petroleum	-8.3	12.1	77.9
Food & Beverages	2.9	2.0	78.5
Textiles	8.5	220.1	91.3
Other Nondurables	9.4	37.1	NA
ALL MANUFACTURING	4.1	10.6	77.1

*Second quarter
**Third quarter
NA - Not available

Energy Defuses Investment Growth

Chart III also shows that, in general, the recession didn't hurt manufacturers of nondurable goods as much as it hurt durables producers. Moreover, operating rates in the paper, rubber and plastics, and textile industries have risen quite high thus far in the recovery. Hence it's not surprising that these same industries were among the few to increase plant and equipment outlays in 1983, and that they plan

further hikes in 1984. In the case of paper and textiles, the percent increases are not dramatic--8.4% and 5.8%, respectively--partly because they will be doing less "catch-up" investment than other industries.

By contrast, producers of rubber and plastic products intend to raise 1984 capital spending nearly 18% on top of a similar spurt in 1983. These robust gains reflect the 1983 housing and auto booms, as well as strong demand for plastics spurred by the personal computer revolution.

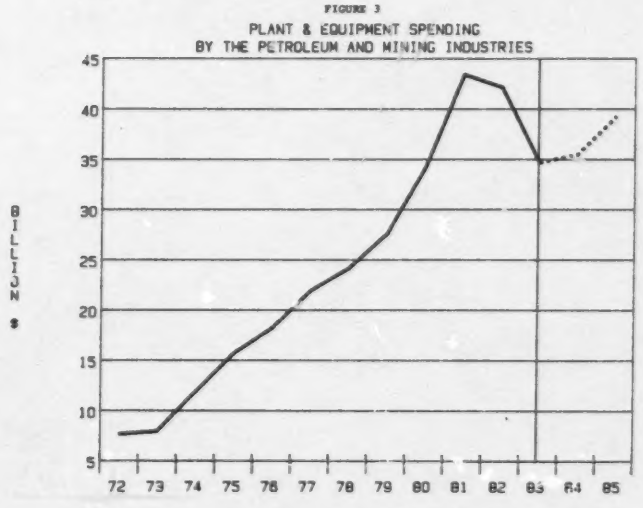
Since the chemical industry produces the raw materials that go into plastics, it too has enjoyed a demand surge stemming from autos, housing, and computers. Yet chemical capital spending was weak in 1983 and the survey points to only a 5.9% increase in 1984. Probably the obstacle here is the operating rate, still below 80%. With demand for industrial chemicals and plastics up strongly, however, with demand for consumer chemical products rising, and with demand for agricultural chemicals set to rise, chemical capital spending in 1984 could grow faster than the survey indicates.

While investment by chemical companies has been weak, investment by petroleum companies has been weaker still. In 1983, plant and equipment outlays by the oil industry plunged an estimated 12%. Prime reason--the drop in the price of crude oil that led to a dramatic drop in drilling expenditures. (Another reflection of declining oil prices is the cutback in business' capital spending on energy conservation--down from more than 3% in 1980 and 1981 to an estimated 2.4% in 1983. See Table VI.)

On the refining end of the business, recession plus continued conservation by business and homeowners plus improved auto mileage have cut energy demand, prompting oil companies to close some refining capacity. Another reason for moderation in refining outlays: In recent years oil companies have poured billions of dollars into refineries to enable them to use low-grade crude. Some of these large capital improvement projects may be ending, resulting in a slowdown in spending compared to the 1979-82 period of major refinery expenditures.

With petroleum so capital intensive, any spending reduction here takes a significant toll on total business outlays. Moreover, much of the mining industry's capital spending is on oil and gas wells, since independent drillers are classified as mining companies. Hence, like petroleum, mining capital spending declined sharply in 1983. (See Figure 3.) Together, these two industries--major positive forces in

FIGURE 3



capital spending since OPEC I in 1973--accounted for more than half the estimated $12 billion decline in total business capital spending between 1982 and 1983. Because prices in the oil patch have declined significantly, however, drilling activity has not declined as much as the dollar figures suggest.

Interestingly, as shown in Figure 3, mining and petroleum industries plan to boost plant and equipment outlays sharply in 1985. It seems, therefore, that energy producers look for continuing recovery to boost demand and prices in the next couple of years.

Nonmanufacturing: Both Strong and Weak

After mining, airlines have the weakest capital spending programs among nonmanufacturers in 1983 and 1984. Given the price wars and resulting profits crunch that have shaken the industry, capital spending cuts of 2.5% in 1983 followed by a planned 11.4% cut in 1984 are not surprising. For not only will the financially troubled airlines keep capital budgets grounded, but healthier lines will be able to buy used aircraft made available when other lines drop routes.

Despite the industry's current financial problems, the recovery is starting to help. As shown in Chart IV, air traffic is climbing. And in anticipation of future needs, the airline industry plans to lift equipment outlays a hefty 15% in 1985.

Chart IV also supports the survey's estimate of a huge 1983 drop in capital spending by railroads. But looking ahead, railroads in 1984 plan to recoup much of the outlay reductions in 1983. A major positive harbinger: After slumping through much of 1983, railroad's number one customer--coal--is now coming back and should enjoy a solid recovery in 1984.

Chart IV. Indicators of Economic Health in Nonmanufacturing

	1982	1983	% Change 1982-83
Railroads			
Freight cars ordered*	5,175	3,851	-25.6%
Freight cars loaded (Million)**	14.6	14.4	-1.3
Airlines			
Domestic revenue passenger miles (Billion)***	151.3	161.4	6.7
Electric Utilities			
Electricity demand (Billion Kwh)	2,094	2,136(e)	2.0
Gas Utilities			
Natural gas consumption (Trillion Btu)	18,346	17,533(e)	-4.4
Trade & Services			
Retail Sales (Billion $)****	89.5	99	10.6

*First eight months
**First 40 Weeks
***First nine months
****Third quarter
e - Estimate

With coal joining the rest of the economic recovery, railroads apparently anticipate higher cash flow next year to finance major capital improvements.

After railroads, companies in the huge trade and services sector plan the biggest investment increase within nonmanufacturing next year--11.1%. One big difference between trade and services and railroads, however, is that the former boosted plant and equipment outlays 5% in 1983.

The strength in trade and services comes from several areas: 1) Vigorous recovery in consumer spending at retail stores, as shown in Chart IV. 2) Continuing growth of health-care companies. 3) Rapid growth of service companies in computer-related fields. With parts of the trade and services sector now on a fast track, capital spending growth will probably remain strong. Hence according to the survey, outlays will rise 10.6% in 1985.

The remaining nonmanufacturing industries--the utilities and communications--have been or will be weak. Communications companies cut capital outlays in 1983 and plan only a very small increase in 1984. But this weakness may be temporary, a result of the nation's new telephone companies trying to sort things out early in their new careers.

Weakness in the utilities may be more permanent. Faced with sluggish demand growth due to conservation, electric utilities plan just a 2.3% hike in capital outlays next year, followed by a 13% reduction in 1985. Gas utilities, which saw industrial users switch to other fuels in 1983, slashed 1983 spending an estimated 17%. The gas companies, however, intend a hefty restoration of capital budgets in both 1984 (spending up 10.9%) and 1985 (up 25.3%).

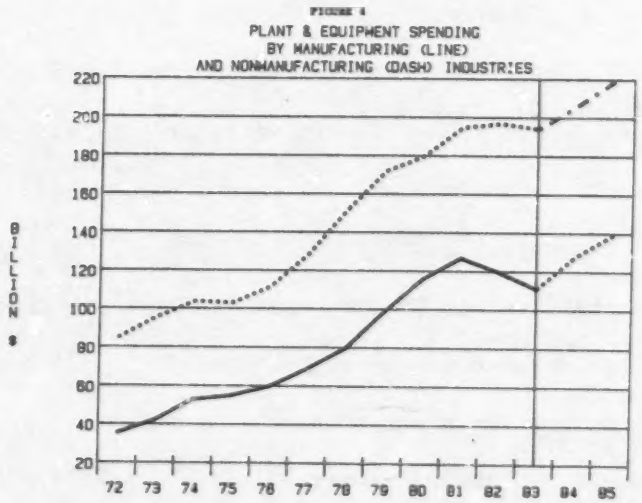
1985 Raises Questions

In 1985, business currently plans to raise capital outlays 7.4% over 1984 to $358 billion. If the recovery rolls through 1984, however, and if interest rates don't rise too much, then capital expenditures in 1985 could grow faster than 7.4%.

In fact, when capital outlays are on the rise, the survey typically underestimates growth two years ahead. One reason may be that when answering the survey, companies report only projects that are already budgeted. That would leave out projects still on the drawing boards--projects that could materialize by the time two years go by.

Despite this tendency to underestimate, however, most industries are already planning double-digit percentage hikes in new plant and equipment outlays in 1985. These boosts are somewhat offset, however, by planned reductions in a half dozen other industries. If the industries with big plans stick to their guns, and if recovery spurs other industries to raise budgets as time goes on, 1985 could be a very good year for capital spending.

Meanwhile, business' current projection of future spending is shown in Figure 4.



Notes on the Survey

Results in this report are based on the responses of 534 firms to a survey taken in September and October. These firms account for one-third of capital spending in the country (Table VIII). For capital spending, firms supplied dollar estimates of future plant and equipment expenditures. Estimates for each year were summed by industry, and percentage changes between years were calculated. Each industry's percentage change for 1982-83, derived from the sample firms, was then applied to the industry's total capital spending in 1982 in order to derive the industry's total estimated capital spending in 1983. The 1983-84 percentage change was applied to the estimated 1983 total industry figure to derive the industry's total estimated 1984 capital spending. The procedure was the same for 1985. Firms with extreme percent changes in spending (outliers) were removed from the sample on a year-by-year basis. The source of actual 1982 capital spending is the U.S. Department of Commerce.

Once each industry's total estimated capital spending was derived, the figures were summed to derive estimates for the various aggregate groupings--durables, nondurables, all manufacturing, all nonmanufacturing, and all business.

All data presented in this report other than the capital spending figures are based on percentage--rather than dollar--answers supplied by the sample firms. Percentage responses were weighted by size of firm within an industry to derive industry figures. Size was determined by the dollar level of a firm's 1982 capital spending. Figures for the aggregates were then derived by weighting each industry by size using industries' capital spending in 1982 as weights.

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NOTE: The other durables category listed in the tables includes lumber, furniture, jewelry, toys, and transportation equipment other than autos and aerospace. Other nondurables includes apparel, tobacco, printing and publishing, and leather. The trade and services category includes retail and wholesale trade, banking, holding companies, insurance companies, hotels, laundries, and personal and business services. The communications and other category includes construction firms and transportation services other than airlines and railroads.

TABLE I

PLANS FOR CAPITAL SPENDING
(Billions of Dollars)

INDUSTRY	1982 ACTUAL	1983 ESTIMATE	1984 PLANNED	1983-84 % CHANGE	1985 PLANNED	1984-85 % CHANGE
Iron & Steel	$ 3.47	$ 2.66	$ 3.44	29.2%	$ 4.13	20.0%
Nonferrous Metals	2.71	2.04	2.68	31.6	3.02	12.7
Electrical Machinery	10.62	10.93	12.58	15.1	13.37	6.3
Non-Electrical Machinery	12.89	11.39	13.21	16.0	14.81	12.1
Autos,Trucks & Parts	7.92	6.85	10.22	49.2	11.72	14.7
Aerospace	6.04	5.39	5.84	8.3	6.27	7.4
Fabricated Metals	2.59	2.16	2.31	6.9	2.86	23.9
Instruments	2.35	2.51	2.78	10.9	3.15	13.4
Stone,Clay & Glass	2.61	2.68	2.80	4.6	3.09	10.2
Other Durables	5.26	4.15	5.65	36.1	5.06	-10.5
TOTAL DURABLES	56.44	50.76	61.51	21.2	67.48	9.7
Chemicals	13.27	12.13	12.85	5.9	13.90	8.2
Paper & Pulp	5.97	6.86	7.44	8.4	9.80	22.1
Rubber & Plastic	1.71	2.05	2.42	17.9	2.36	-2.3
Petroleum	26.69	23.51	25.32	7.7	27.93	10.3
Food & Beverage	7.74	6.91	8.43	22.0	8.34	-1.1
Textiles	1.33	1.37	1.45	5.8	1.41	-2.9
Other Nondurables	6.52	7.14	7.98	11.7	7.68	-3.7
TOTAL NONDURABLES	63.23	59.97	65.89	9.9	71.42	8.4
ALL MANUFACTURING	119.68	110.73	127.40	15.1	138.90	9.0
Mining	15.45	11.17	10.14	-9.2	11.29	11.3
Railroads	4.38	3.11	4.30	38.4	4.90	13.9
Airlines	3.93	3.83	3.39	-11.4	3.91	15.4
Electric Utilities	33.40	35.50	36.32	2.3	31.60	-13.0
Gas Utilities	8.55	7.08	7.85	10.9	9.84	25.3
Communication & Other	44.10	41.81	42.40	1.4	45.28	6.8
Trade & Services	86.95	91.43	101.58	11.1	112.35	10.6
ALL NONMANUFACTURING	196.75	193.93	205.98	6.2	219.17	6.4
ALL BUSINESS	316.43	304.66	333.38	9.4	358.07	7.4

NOTE: The figures in this table represent total industry spending in the U.S., and not just the spending of firms in the survey. The figures are not adjusted for inflation; thus year-to-year changes are in nominal, not real, terms. Derivation of the data is discussed in the text under "Notes on the Survey."

TABLE II

INFLATION EXPECTATIONS
(Percentage Change)

INDUSTRY	Expected % Change, 1983-84	
	PLANT & EQUIPMENT PRICES	PRODUCT PRICES
Iron & Steel	5.6	10.4
Nonferrous Metals	5.6	10.9
Electrical Machinery	5.3	5.1
Non-Electrical Machinery	6.0	3.0
Autos,Trucks & Parts	6.2	1.8
Aerospace	5.2	4.7
Fabricated Metals	5.2	3.3
Instruments	5.7	3.3
Stone,Clay & Glass	6.4	4.4
Other Durables	4.3	3.0
TOTAL DURABLES	5.6	4.2
Chemicals	5.5	5.9
Paper & Pulp	5.2	4.7
Rubber & Plastic	5.4	3.4
Petroleum	5.8	4.4
Food & Beverage	6.3	4.3
Textiles	3.7	4.4
Other Nondurables	6.1	4.6
TOTAL NONDURABLES	5.7	4.7
ALL MANUFACTURING	5.6	4.4
Mining	4.8	4.2
Railroads	5.2	4.8
Airlines	6.8	5.0
Electric Utilities	6.3	5.0
Gas Utilities	6.3	5.0
Communication & Other	5.6	7.0
Trade & Services	5.9	4.4
ALL NONMANUFACTURING	5.8	5.1
ALL BUSINESS	5.8	4.9

TABLE III

SALES EXPECTATIONS
(Billions of Dollars)

INDUSTRY	1983 ESTIMATED	1984 EXPECTED	1983-84 % CHANGE
Iron & Steel	46.2	61.1	32.2
Nonferrous Metals	55.4	65.5	18.3
Electrical Machinery	155.9	174.8	12.1
Non-Electrical Machinery	176.8	197.4	11.7
Autos,Trucks & Parts	150.5	161.5	7.3
Aerospace	70.5	76.4	8.4
Fabricated Metals	120.4	133.3	10.7
Instruments	48.5	53.2	9.7
Stone,Clay & Glass	47.9	53.2	11.0
Other Durables	140.3	154.9	10.4
TOTAL DURABLES	1,012.4	1,131.2	11.7
Chemicals	187.0	209.1	11.8
Paper & Pulp	85.2	94.4	10.8
Rubber & Plastic	51.7	57.9	12.0
Petroleum	193.1	204.3	5.8
Food & Beverage	287.5	332.9	15.8
Textiles	53.0	58.4	10.2
Other Nondurables	169.9	197.8	16.4
TOTAL NONDURABLES	1,027.4	1,154.9	12.4
ALL MANUFACTURING	2,039.8	2,286.1	12.1
Mining	NA	NA	7.2
Railroads	NA	NA	10.4
Airlines	NA	NA	8.1
Electric Utilities	NA	NA	11.0
Gas Utilities	NA	NA	9.8
Communication & Other	NA	NA	8.2
Trade & Services	NA	NA	15.1

TABLE IV

REAL SALES EXPECTATIONS
(Billions of 1983 Dollars)

INDUSTRY	1983 ESTIMATED	1984 EXPECTED	1983-84 % CHANGE
Iron & Steel	46.2	55.3	19.8
Nonferrous Metals	55.4	59.1	6.6
Electrical Machinery	155.9	166.2	6.6
Non-Electrical Machinery	176.8	191.6	8.4
Autos,Trucks & Parts	150.5	158.6	5.4
Aerospace	70.5	73.0	3.5
Fabricated Metals	120.4	129.0	7.1
Instruments	48.5	51.5	6.3
Stone,Clay & Glass	47.9	50.9	6.3
Other Durables	140.3	150.4	7.2
TOTAL DURABLES	1,012.4	1,085.7	7.2
Chemicals	187.0	197.5	5.6
Paper & Pulp	85.2	90.2	5.8
Rubber & Plastic	51.7	56.0	8.3
Petroleum	193.1	195.6	1.3
Food & Beverage	287.5	319.1	11.0
Textiles	53.0	55.9	5.6
Other Nondurables	169.9	189.1	11.3
TOTAL NONDURABLES	1,027.4	1,103.5	7.4
ALL MANUFACTURING	2,039.8	2,189.2	7.3
Mining	NA	NA	2.9
Railroads	NA	NA	5.3
Airlines	NA	NA	2.9
Electric Utilities	NA	NA	5.8
Gas Utilities	NA	NA	4.6
Communication & Other	NA	NA	1.1
Trade & Services	NA	NA	10.2

TABLE V

BUSINESS' VIEW OF THE ECONOMY IN 1984

	Percentage of Companies Reporting				Weighted by Size of Company			
INDUSTRY	RECESSION	SLOW GROWTH	NORMAL GROWTH	RAPID GROWTH	RECESSION	SLOW GROWTH	NORMAL GROWTH	RAPID GROWTH
Iron & Steel	0.0	12.5	12.5	75.0	0.0	5.0	2.5	92.5
Nonferrous Metals	0.0	0.0	18.2	81.8	0.0	0.0	0.7	99.3
Electrical Machinery	0.0	11.1	27.8	61.1	0.0	1.5	40.8	57.8
Non-Electrical Machinery	0.0	3.6	25.0	71.4	0.0	0.0	2.9	97.1
Autos,Trucks & Parts	0.0	0.0	33.3	66.7	0.0	0.0	9.3	90.7
Aerospace	0.0	0.0	25.0	75.0	0.0	0.0	28.4	71.6
Fabricated Metals	0.0	11.5	30.8	57.7	0.0	0.3	51.7	48.0
Instruments	0.0	0.0	28.0	72.0	0.0	0.0	0.9	99.1
Stone,Clay & Glass	0.0	6.3	25.0	68.8	0.0	1.5	57.6	40.9
Other Durables	0.0	14.3	14.3	71.4	0.0	0.8	12.3	86.9
TOTAL DURABLES	0.0	5.8	25.0	69.2	0.0	0.8	19.1	80.2
Chemicals	0.0	12.5	4.2	83.3	0.0	6.4	0.0	93.6
Paper & Pulp	0.0	12.5	18.8	68.8	0.0	0.8	5.6	93.6
Rubber & Plastic	0.0	0.0	23.1	76.9	0.0	0.0	6.5	93.5
Petroleum	0.0	15.4	23.1	61.5	0.0	1.6	31.9	66.5
Food & Beverage	4.3	8.7	17.4	69.6	0.0	0.9	29.8	69.3
Textiles	6.7	13.3	26.7	53.3	0.0	1.7	24.1	74.2
Other Nondurables	0.0	24.0	20.0	56.0	0.0	50.8	4.2	45.0
TOTAL NONDURABLES	0.7	14.1	17.8	67.4	0.0	7.5	18.8	73.8
ALL MANUFACTURING	0.4	10.2	21.2	68.3	0.0	4.3	18.9	76.8
Mining	0.0	13.6	31.8	54.5	0.0	5.9	46.6	47.6
Railroads	0.0	0.0	25.0	75.0	0.0	0.0	7.2	92.8
Airlines	0.0	0.0	20.0	80.0	0.0	0.0	29.2	70.8
Electric Utilities	2.7	8.1	8.1	81.1	4.5	2.4	5.5	87.7
Gas Utilities	0.0	20.0	20.0	60.0	0.0	8.9	21.1	70.0
Communication & Other	0.0	0.0	36.8	63.2	0.0	0.0	9.4	90.6
Trade & Services	1.9	19.2	21.2	57.7	0.0	50.0	3.4	46.6
ALL NONMANUFACTURING	1.3	11.8	23.3	63.6	0.8	23.3	9.9	66.0
ALL BUSINESS	1.1	11.4	22.7	64.8	0.6	18.3	12.3	68.9

Rapid Real Growth: 4% or higher Normal Real Growth: 2.5% to 3.9%
Slow Real Growth: 1.0% to 2.4% Recession: Less than 1%

TABLE VI

ENERGY CONSERVATION
(Percentage Share)

INDUSTRY	% Capital Spending Devoted to Conservation	
	1983 ESTIMATED	1984 EXPECTED
Iron & Steel	5.6	6.6
Nonferrous Metals	3.9	5.6
Electrical Machinery	2.2	2.3
Non-Electrical Machinery	2.4	2.7
Autos,Trucks & Parts	0.5	0.6
Aerospace	2.8	2.8
Fabricated Metals	7.0	7.0
Instruments	6.0	6.4
Stone,Clay & Glass	9.3	10.1
Other Durables	1.6	1.4
TOTAL DURABLES	3.0	3.3
Chemicals	4.6	5.8
Paper & Pulp	5.0	4.3
Rubber & Plastic	3.0	3.5
Petroleum	1.7	1.5
Food & Beverage	4.3	7.6
Textiles	6.1	5.7
Other Nondurables	2.4	2.3
TOTAL NONDURABLES	3.1	3.7
ALL MANUFACTURING	3.1	3.5
Mining	1.4	0.8
Railroads	2.7	3.3
Airlines	3.0	3.1
Electric Utilities	2.0	2.1
Gas Utilities	5.9	5.7
Communication & Other	0.7	0.7
Trade & Services	2.2	1.7
ALL NONMANUFACTURING	2.0	1.7
ALL BUSINESS	2.4	2.4

TABLE VII

HOW MUCH INDUSTRY IS SPENDING FOR AUTOMATION
(Percentage Share)

INDUSTRY	% of Capital Spending for Automation		
	1982 ESTIMATED	1983 PLANNED	1984 PLANNED
Iron & Steel	13.6	13.6	17.3
Nonferrous Metals	8.7	11.7	15.2
Electrical Machinery	36.4	37.1	40.9
Non-Electrical Machinery	20.2	18.9	20.9
Autos,Trucks & Parts	30.0	35.4	30.1
Aerospace	25.2	26.4	29.1
Fabricated Metals	18.7	28.2	26.6
Instruments	28.4	30.3	30.9
Stone,Clay & Glass	29.7	30.3	35.9
Other Durables	12.5	13.7	14.9
TOTAL DURABLES	24.2	25.7	27.1
Chemicals	15.0	15.2	14.2
Paper & Pulp	9.3	10.9	11.4
Rubber & Plastic	21.2	25.8	22.5
Petroleum	4.5	4.2	5.1
Food & Beverage	7.2	9.6	11.3
Textiles	26.2	27.3	28.3
Other Nondurables	15.8	17.7	16.8
TOTAL NONDURABLES	9.6	10.3	10.5
ALL MANUFACTURING	16.5	17.5	18.4
Mining	5.9	3.4	3.4
Railroads	5.2	5.0	5.6
Airlines	7.2	10.1	10.5
Electric Utilities	7.1	10.1	10.9
Gas Utilities	5.5	5.4	5.7
Communication & Other	14.7	19.4	19.9
Trade & Services	10.7	13.7	19.0
ALL NONMANUFACTURING	10.2	12.9	15.5
ALL BUSINESS	12.6	14.7	16.6

TABLE VIII

SURVEY SAMPLE SIZE

INDUSTRY	PERCENTAGE OF CAPITAL SPENDING COVERED BY SURVEY
Iron & Steel	26.2
Nonferrous Metals	37.0
Electrical Machinery	34.0
Non-Electrical Machinery	19.3
Autos,Trucks & Parts	88.9
Aerospace	22.6
Fabricated Metals	19.4
Instruments	49.9
Stone,Clay & Glass	25.3
Other Durables	17.7
TOTAL DURABLES	34.9
Chemicals	35.2
Paper & Pulp	25.6
Rubber & Plastic	14.6
Petroleum	76.2
Food & Beverage	27.4
Textiles	24.5
Other Nondurables	39.1
TOTAL NONDURABLES	50.3
ALL MANUFACTURING	43.0
Mining	9.1
Railroads	36.8
Airlines	61.3
Electric Utilities	65.2
Gas Utilities	37.9
Communication & Other	51.0
Trade & Services	4.5
ALL NONMANUFACTURING	28.9
ALL BUSINESS	34.2

McGraw-Hill Economics

1221 Avenue of the Americas, 37th Floor
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37th ANNUAL McGRAW-HILL SPRING SURVEY OF BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT, 1984-87

The strong capital spending recovery is gathering yet more steam, according to McGraw-Hill's "37th Annual Spring Survey of Business' Plans for New Plants and Equipment."

Last fall, a McGraw-Hill survey found that U.S. companies planned to boost capital spending 9.4% in 1984. By the winter, firms had raised their projections to 16.9%. And now the latest survey finds another upward ratchet to 18.6%.

If the current projection is realized, business would put $359 billion into new plant and equipment this year in the U.S. (Table I).* That would mark the first annual gain in capital investment since 1981, when companies invested $321.5 billion.

The survey also found that business expects prices of plant and equipment to rise 5.6% this year (Table VIII). If this projection turns out to be accurate then "real" or inflation-adjusted capital spending would surge more than 12%--one of the best yearly gains on record.

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*Tables with Roman numerals appear at back of report.

The spring survey also found that, compared to last year, companies are starting to spend significantly more money on expansion. This move suggests U.S. business is confident the economic expansion will continue, thus creating the need for new capacity.

Conducted in March and April, the survey included responses from 540 companies that account for 28% of total U.S. capital spending (Table IX). The dollar figures reported in the survey are "blown up", however, to represent spending of all U.S. firms.

Spending Will Soar in '84, But the Survey Looks Too Strong

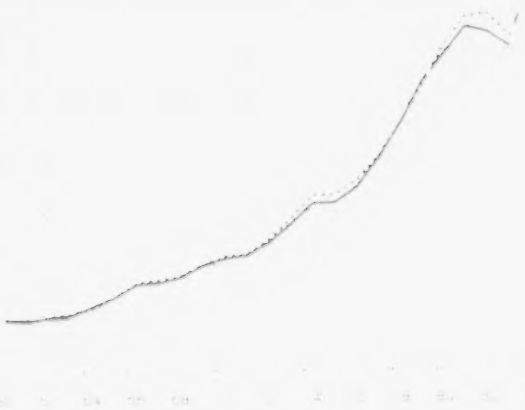
That 1984 will be a very strong growth year for capital spending is undoubtedly true. But whether growth will be as strong as the survey says is another question.

Typically, when the economy emerges from recession into expansion, the McGraw-Hill surveys at first undershoot and eventually overshoot actual capital spending. Thus last fall, when the recession was still a vivid memory, capital budgets of survey respondents reflected a great deal of caution.

A few months later, however, budgets were just bursting with capital projects. The ebullience born of growing sales and rising profits had taken hold. By the time the spring survey was taken, boards of directors had approved even more plans. Given the track record of the surveys during early expansion years, however, some of these plans will be delayed or scaled back.

Even when the economy is not gathering strength, moreover, the spring survey tends to be consistently too bullish, as shown in Chart I. (The chart plots the spring survey's current-year spending projection

against what finally occurred.) While the overshooting is more pronounced during recession, it is also evident in expansion years such as 1972-73 and 1976.



Thus the history of the surveys, the spring survey in particular, suggests that the projection of 18.6% growth in capital spending this year is on the strong side.

At the same time, the increase in investment will certainly be large. Sales and cash flow have surged during the recovery, giving companies both the confidence and the wherewithal to invest. Meanwhile, foreign competition and subdued inflation have provided plenty of incentive for U.S. firms to cut costs through modernization of plant and equipment.

The buildup in the equipment sector of capital spending is shown in Table 1 on the next page. Capital equipment shipments and output advanced rapidly through 1983. So did nondefense capital goods orders, considered a key harbinger of future shipments. Hence another solid gain is in store for capital equipment in 1984.

Table 1, however, also contains some cautionary information. Even though cash flow is way up from recessionary levels, corporate financing

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needs are starting to run ahead even faster. Hence balance sheets, after getting battered during the recession and then improving in the recovery, are starting to deteriorate once more. If interest rates keep rising,

Table 1
Equipment Capital Investment Indicators

	1983				1984
	I	II	III	IV	I
Demand Indicators					
Nondefense Capital Goods Shipments--Billion $	256.0	269.4	275.4	291.1	293.4
In Billion 1972 $	107.3	112.4	114.1	120.3	120.2
Nondefense Capital Goods Orders--Billion $	238.9	276.4	279.3	301.9	314.7
In Billion 1972 $	100.2	115.3	115.8	124.7	128.9
Business Equipment Output--Billion 1972 $	88.2	91.0	95.6	100.3	106.9
Balance Sheet Indicators					
Prime Rate (%)	10.88	10.50	10.80	11.00	11.07
Internal Corporate Cash Flow--Billion $	225.5	231.9	243.4	250.5	255.8
As % of Capital & Inventory Spending	113.0	98.9	88.4	83.6	80.0
Ratio of Debt Service to Cash Flow	0.546	0.514	0.483	0.508	0.522
Ratio of Short-Term to Total Liabilities	0.49	0.48	0.48	0.49	0.50
Commercial & Industrial Loans--Billion $	218.9	216.8	215.6	217.1	222.0

as many analysts think they will, then balance sheets will continue to worsen. That implies the big quarter-to-quarter gains in capital investment are through, another reason to think the survey is somewhat too bullish for 1984 as a whole.

A good news-bad news picture also emerges in construction, as shown in Table 2 on the next page. Manufacturing operating rates have improved dramatically in the past year and construction contracts for

nonresidential buildings are up substantially. But office vacancy rates are high, and once again the financial picture is getting somewhat blurred.

In short, the level of demand for capital equipment and structures is high compared to a year ago. But developing financial constraints could keep the survey's super-strong 18.6% projection from being realized.

Table 2
Structures Investment Indicators

	1983				1984
	I	II	III	IV	I
Demand Indicators					
Nonresidential Construction Contracts--Billion $*	13.9	16.1	16.8	16.0	15.4
Manufacturing Operating Rate (%)	70.7	73.7	77.3	78.6	80.5
Office Vacancy Rate (%)**	10.8	11.7	11.7	12.4	13.1
Financial Indicators					
Corporate Bond Rate (%)	11.84	11.57	12.34	12.41	12.28
Debt/Equity Ratio	1.160	1.134	1.115	1.113	1.127
Short-Term to Total Liabilities	0.49	0.48	0.48	0.49	0.50
Ratio of Corporate Interest Expense to Cash Flow	0.721	0.701	0.679	0.654	0.661

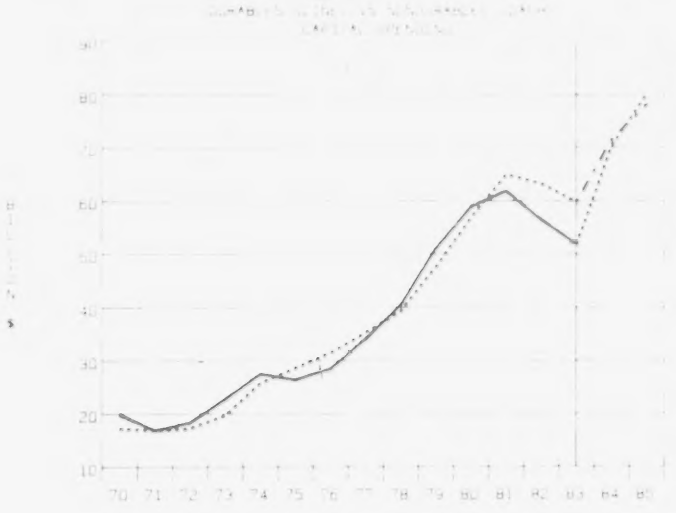
*F.W. Dodge
**Coldwell Banker

Durable Goods Producers Gear Up

Among broad industry categories, the biggest percent increase in 1984 capital spending will be chalked up by manufacturers of durable goods, according to the survey. This finding is not surprising, given that

durables producers slashed capital outlays in recent years, and thus have a lot of making up to do. If current plans are realized, investment by durables will surge 35.8% to $70.3 billion.

After durables, nondurables producers plan the biggest percent boost in investment--up 19.6% to $71.5 billion. Manufacturers of nondurable goods also cut capital spending in the past couple of years, though not nearly as much as durables. This pattern is typical, since demand for durable products such as autos and steel is more sensitive to the business cycle than demand for nondurable goods such as food and paper. The paths of durable and nondurable capital spending during the past dozen years plus survey projections for two years is shown in Chart II.



Within the durable goods sector, almost every major industry plans a hefty investment hike. The basic reason is simple: Demand for durable products surged during the recession, hence operating rates jumped, profits perked up, and confidence rose. As an indication of confidence, see Table VII at the back of this report, which shows that after taking out inflation, manufacturers of durable goods expect sales in 1984 to top

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Table 3. Durables Indicators

	1983				1984			
	I	II	III	IV	I	81	82	83
Iron & Steel								
Operating Rate (%).	55.2	60.2	65.2	68.8	73.0	78.3	51.7	62.4
New Orders.....	46.320	46.316	56.052	56.880	NA	69.195	43.232	51.392
After-Tax Profits..	-3.036	-2.464	-2.280	NA	NA	3.507	-3.705	NA
Nonferrous Metals								
Operating Rate (%).	69.2	72.6	74.3	77.9	77.1	81.9	66.7	73.5
New Orders.....	54.956	57.368	60.320	66.664	NA	57.235	48.166	59.827
After-Tax Profits..	-0.456	0.200	0.148	NA	NA	2.124	-0.333	NA
Electrical Machinery								
Operating Rate (%).	72.4	74.7	78.3	80.6	83.0	79.7	74.1	76.5
New Orders.....	148.548	161.848	172.328	180.356	NA	144.782	147.220	165.770
After-Tax Profits..	5.252	5.072	6.364	8.808	NA	7.872	6.449	6.374
Nonelectrical Machinery								
Operating Rates (%)	62.8	66.5	70.9	73.0	77.1	80.5	68.0	68.3
New Orders.....	157.160	180.916	189.872	200.524	NA	200.036	162.436	182.118
After-Tax Profits..	5.224	7.704	8.068	11.772	NA	12.580	8.038	8.192
Autos, Trucks & Parts								
Operating Rate (%).	64.2	69.5	77.1	81.1	86.6	62.7	59.1	73.0
Shipments.....	133.740	143.800	163.328	171.320	NA	117.075	112.635	153.047
Ater-Tax Profits...	4.232	8.652	6.080	NA	NA	-0.209	0.734	NA
Aerospace								
New Orders.....	83.072	80.092	64.168	91.112	NA	63.938	67.812	79.611
After-Tax Profits..	2.252	3.044	2.540	NA	NA	2.966	2.193	NA
Fabricated Metals								
Operating Rate (%).	63.2	65.9	70.4	71.4	73.5	78.6	65.0	67.7
New Orders.....	111.872	117.928	123.520	128.532	NA	122.407	106.654	120.463
After-Tax Profits..	1.344	3.156	3.028	3.464	NA	4.235	2.320	2.748
Instruments								
Operating Rate (%).	74.3	74.4	76.4	76.6	77.9	79.2	77.5	75.4
New Orders.....	48.228	49.828	51.924	52.528	NA	48.513	48.664	50.627
After-Tax Profits..	3.116	3.472	4.144	3.688	NA	4.287	3.859	3.605
Stone, Clay & Glass								
Operating Rate (%).	67.7	71.5	75.7	77.6	80.4	74.0	66.5	73.2
New Orders.....	46.988	48.828	50.396	51.268	NA	47.857	43.407	49.370
After-Tax Profits..	-0.492	1.360	2.144	1.496	NA	1.627	0.408	1.127

NOTE: Shipments and new orders in billion dollars at seasonally adjusted annual rate. Profits in billion dollars, quarterly rate, not seasonally adjusted. Operating rates in percent. Operating rates in this table are seasonally adjusted and are not directly comparable to those in Table V at the end of this report, which are not seasonally adjusted.

the 1983 level by a mighty 10%.

The forces working for a strong capital spending gain by durables in 1984 are summarized in Table 3 on the previous page. To take one example, between early 1983 and early 1984 the operating rate of the nonelectrical machinery industry spurted 15 percentage points. From the beginning to the end of 1983, the value of machinery new orders jumped 18% and industry profits more than doubled. As a result, machinery makers plan to boost capital outlays this year by 25%.

In the nondurables sector, the booming rubber and plastics industry projects the strongest percent investment increase--up 44%. This industry has, of course, been a prime beneficiary of the 1983-84 surge in housing, autos, and computers. The sales and profits picture shown on the next page in Table 4 attests to that. The table also shows that much of the industry's currently available capacity is in use. Hence it's not surprising that the rubber and plastics industry also plans a large 9% addition to capacity this year plus another 9%-10% next year (Table IV).

Elsewhere in nondurables, it does seem surprising that two apparently thriving industries--paper (1984 spending up 8%) and textiles (up 10%)--do not plan to spend more on plant and equipment. Part of the answer may be that both of these industries increased spending last year while most other industries cut back. Hence paper and textiles may not have so many back-burner projects to move to the front burner.

Further, in the case of paper, some expansion projects requiring heavy outlays in the past may be coming on line this year, thus leading to a slowdown in current outlays. (Paper companies in the sample report a strong 7% increase in capacity this year.) Also note that paper investment in Canada--or any other country for that matter--are not included in the survey, which covers spending in the U.S. only.

Table 4. Nondurables Indicators

	1983				1984			
	I	II	III	IV	I	81	82	83
Chemicals								
Operating Rate...	70.6	73.7	76.9	78.1	77.7	75.6	68.8	74.8
Shipments.....	174.848	185.976	195.956	204.808	NA	180.390	172.744	190.397
After-Tax Profits	11.020	12.180	12.932	10.800	NA	12.973	10.324	11.733
Paper								
Operating Rate...	89.5	90.8	94.4	95.5	96.5	88.1	86.3	92.6
Shipments.....	80.308	84.152	87.020	91.168	NA	80.251	78.992	85.662
After-Tax Profits	1.764	2.172	2.712	2.700	NA	3.110	1.460	2.337
Rubber & Plastics								
Operating Rate...	82.3	89.6	94.4	96.3	97.9	85.0	79.5	90.6
Shipments.....	48.668	51.004	52.988	54.712	NA	53.165	50.152	51.843
After-Tax Profits	1.548	1.800	2.096	2.020	NA	1.663	1.170	1.866
Petroleum								
Operating Rate...	69.0	75.4	77.2	76.2	79.1	78.9	72.9	74.4
Shipments.....	175.300	192.848	201.864	193.720	NA	224.146	206.377	190.933
After-Tax Profits	14.632	18.116	22.120	22.648	NA	23.733	19.666	19.379
Food & Beverage								
Operating Rate...	76.5	77.0	78.1	76.6	77.8	77.5	75.8	77.1
Shipments.....	281.516	288.064	291.172	289.816	NA	272.113	277.320	287.642
After-Tax Profits	5.952	8.896	9.628	11.032	NA	9.109	8.383	8.877
Textiles								
Operating Rate...	80.8	86.3	90.7	89.4	87.4	82.0	77.4	86.8
Shipments.....	47.728	51.324	54.240	55.484	NA	50.283	47.175	52.194
After-Tax Profits	0.964	1.844	1.932	1.680	NA	1.157	0.851	1.605

NOTE: Shipments in billion dollars at seasonally adjusted annual rate. Profits in billion dollars, quarterly rate, not seasonally adjusted. Operating rates in percent. Operating rates in this table are not directly comparable to those in Table V at the end of this report, which are not seasonally adjusted.

Another surprise is the strong 24% leap in capital spending planned by the petroleum industry. As Table 4 shows, petroleum shipments declined in 1983. The operating rate, while not low, is not high either. And the industry plans no addition to refining capacity in the next couple of years. The answer to the large spending increase, therefore, seems to lie in the robust profit recovery engineered in the face of weak demand and prices. That recovery resulted in part from heavy spending in recent years to streamline refineries; but many of those refinery projects are past the stage where they require increased infusions of investment.

The jump in petroleum spending, therefore, seems geared to exploration and development. For with costs down in the oil patch due to the 1983 drilling slump, petroleum companies may be finding attractive exploration projects to pursue with those enlarged profits.

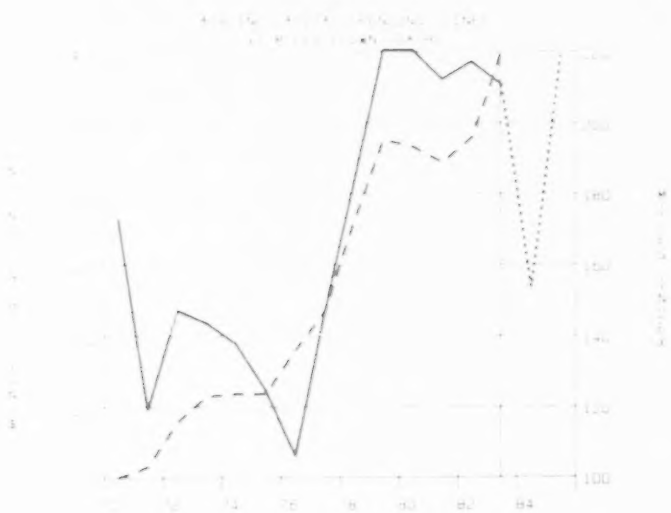
The profits and capital spending plans just discussed are for the part of the petroleum industry that consists of refiners and major integrated companies. Independent oil and gas well drillers and service companies are categorized in the mining industry in Table I, and the 1984 spending outlook for them is quite different. These companies are the ones hit hardest by 1983's slump in crude oil prices. Strapped for cash, they are therefore cutting back investment. And their cutbacks have pushed down capital spending by the overall mining industry as reported in Table I.

The state of business for other nonmanufacturing industries is summarized in Table 5 on the next page. Besides mining, the only other industry planning to cut capital investment this year is the airline industry. Airline traffic has taken off with the recovery but from a very depressed altitude. What's more, outlays this year would depend on

Nonmanufacturing Indicators

	1983				1984			
	I	II	III	IV	I	81	82	83
Mining								
Bituminous Coal Production --thousand net tons.....	190,235	185,055	197,047	208,533	NA	204,588	208,381	195,218
Oil & Gas Well Footage Drilled --thousands of feet.....	83,116	84,054	76,060	82,640	NA	90,272	99,158	81,467
Railroads								
Revenue Freight Ton-Miles --billion miles.....	191.9	204.0	213.6	231.6	NA	911.7	800.1	840.5
Airlines								
Passenger-Miles Revenue--billions	65.0	70.7	75.6	NA	NA	62.1	64.5	NA
Electric Utilities								
Electricity Output --million kw-hr.....	550,558	535,838	644,972	577,355	NA	573,703	560,303	577,181
Gas Utilities								
Natural Gas Sales--trillion btu..	4,455	2,763	2,162	3,456	NA	3,861	3,589	3,209
Communications								
Commercial Construction --billion 1972$,SAAR.....	15.873	14.749	15.512	15.913	17.810	15.616	16.496	15.512
Consumer Spending on Financial Services --billion 1972$,SAAR.....	44.720	45.058	45.356	45.566	45.734	39.215	42.414	45.175
Trade & Services								
Retail Sales--million $,SA.....	1,114.2	1,164.0	1,186.6	1,221.0	1,263.0	1,043.0	1,072.9	1,171.4
Consumer Spending on Personal, Medical & Business Services --billion 1972$,SAAR.....	204.8	208.2	207.0	209.1	210.8	191.1	199.6	207.3

decisions to buy aircraft a couple of years ago, when the industry not only was running into rough recessionary weather, but was also feeling the after-shocks of OPEC II on jet fuel prices. The recovery, however, has led to planned increases in airline capital outlays beyond 1984. Yet even the 70% projected increase in 1985 spending would leave expenditures lower than they were at the end of the last expansion in 1979, as shown in Chart III.



Except for electric utilities, the remaining nonmanufacturing industries all plan double-digit percent increases in capital investment this year. Electric utilities, some of which are delaying or canceling nuclear plants, plan a 6.2% increase; but because they anticipate plant and equipment prices to rise 6.5%, the electric companies plan a small cut in "real" capital spending.

After Cutbacks, Manufacturers Again Think Growth

Perhaps the most significant finding of the survey is not that capital spending in 1984 will be a lot higher than in 1983, but that the

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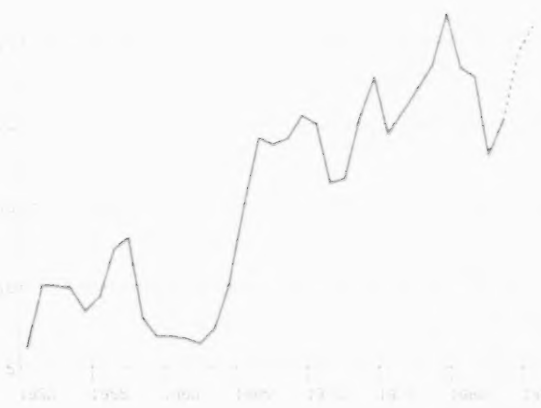
1983 economic recovery has made manufacturing firms expansion-minded. True, the great bulk of manufacturing capital spending in 1984 and 1985--61%--is still slated for replacement and modernization (Table II). Which is understandable, given the need to cut costs and to rebuild a capital stock that in recent years has been aging.

Nonetheless, the share of manufacturing capital outlays going for expansion jumped from an all-time low for the series of 33% in 1982 to 39% in 1983; and right now industry plans to keep it at 39% for the next couple of years. In conjunction with the total capital spending projections, the survey implies that "real" manufacturing spending for expansion will zoom some 20% in 1984. As shown in Chart IV, however, even with a further gain in 1985, manufacturing investment for expansion would still not reach the peak attained in 1979.



A similar story emerges from the survey data on manufacturing construction. Industrial companies' investment in factories, warehouses, offices, and other structures is set to pick up briskly this year. But the starting point is low, hence the rise will not lift outlays back to previous peaks, as shown in Chart V.

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The turnaround in construction spending is also reflected in capacit, projections. Last year, eight of the fifteen industries in Table IV either cut capacity or increased it by only some 1% or less. This year, however, only four industries plan additions of 1% or less.

The survey data on expansion, construction, and capacity thus all seem broadly consistent, the general conclusion being that manufacturers expect better times ahead. Yet compared to previous peaks, spending for growth is still subdued.

As for 1984, such relatively subdued spending should not be regarded as a mystery: It usually takes a couple of years of overall economic growth to push industrial capital investment for expansion and construction beyond previous peaks. Thus for capital budgets to swing sharply to expansion, the economy will have to run surefootedly through 1984. Judging from the survey's 1985 projections, however, it's unclear whether U.S. executives are convinced that it will.

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Notes on the Survey

Results in this report are based on the responses of about 540 firms to a survey taken in March and April. These firms account for 28% of capital spending in the country (Table IX). For capital spending (Table I), firms supplied dollar estimates of future plant and equipment expenditures. Estimates for each year were summed by industry, and percentage changes between years were calculated. Each industry's percentage change for 1983-84, derived from the sample firms, was then applied to the industry's total capital spending in 1983 in order to derive the industry's total estimated capital spending in 1984. The 1984-85 percentage change was applied to the estimated 1984 total industry figure to derive the industry's total estimated 1985 capital spending. The procedure was the same for 1986 and 1987. Firms with extreme percent changes in spending (outliers) were removed from the sample on a year-by-year basis. The source of the actual 1983 capital spending is the U.S. Department of Commerce. Once each industry's total estimated capital spending was derived, the figures were summed to derive estimates for the various aggregate groupings--durables, nondurables, all manufacturing, all nonmanufacturing and all business.

All data presented in this report other than the capital spending figures are based on percentage--rather than dollar--answers supplied by the sample firms. Percentage responses were weighted by size of firm within an industry to derive industry figures. Figures for the aggregates were then derived by weighting each industry by size. The weighting scheme varied according to the data being processed. For example, percentage changes in sales and product prices were weighted by sales levels while percentage changes in plant and equipment price expectations were weighted by capital spending.

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NOTE: The other durables category listed in the tables includes lumber, furniture, jewelry, toys, and transportation equipment other than autos and aerospace. Other nondurables includes apparel, tobacco, printing and publishing, and leather. The trade and services category includes retail and wholesale trade, banking, holding companies, insurance companies, hotels, laundries, and personal and business services. The communications and other category includes construction firms and transportation services other than airlines and railroads.

TABLE I

PLANS FOR CAPITAL SPENDING
(Billions of Dollars)

INDUSTRY	1983 ACTUAL	1984 PLANNED	1983-84 % CHANGE	1985 PLANNED	1986 PLANNED	1987 PLANNED
Iron & Steel	2.97	4.48	50.8	6.55	4.69	3.95
Nonferrous Metals	2.44	3.79	55.1	5.08	5.19	5.57
Electrical Machinery	10.90	15.26	40.0	16.37	16.79	18.54
Non-Electrical Machinery	12.35	15.42	24.9	16.96	18.19	19.88
Autos,Trucks & Parts	7.17	11.20	56.1	14.09	14.24	14.40
Aerospace	4.93	6.79	37.8	6.95	6.64	6.58
Fabricated Metals	2.22	2.96	33.3	3.00	3.40	3.51
Instruments	2.51	3.05	21.6	3.50	3.74	4.05
Stone,Clay & Glass	2.45	3.50	42.9	3.59	2.98	3.27
Other Durables	3.84	3.86	0.5	4.02	4.33	4.78
TOTAL DURABLES	51.78	70.31	35.8	80.12	80.19	84.52
Chemicals	13.28	15.45	16.4	16.92	18.26	18.17
Paper & Pulp	6.18	6.67	7.9	7.25	7.86	8.22
Rubber & Plastic	1.91	2.75	44.1	2.56	2.28	2.49
Petroleum	23.48	29.10	24.0	33.83	37.76	37.79
Food & Beverage	6.60	7.50	13.6	8.22	8.26	8.54
Textiles	1.39	1.52	9.7	1.52	1.53	1.70
Other Nondurables	6.91	8.48	22.8	7.87	6.84	6.25
TOTAL NONDURABLES	59.75	71.48	19.6	78.17	82.79	83.15
ALL MANUFACTURING	111.53	141.79	27.1	158.30	162.98	167.68
Mining	11.83	11.64	-1.6	9.50	9.86	10.64
Railroads	3.92	6.05	54.5	7.33	7.84	8.21
Airlines	3.77	2.34	-38.0	3.97	3.85	3.59
Electric Utilities	34.99	37.16	6.2	32.03	28.28	27.32
Gas Utilities	7.00	9.28	32.5	10.04	10.44	11.30
Communication & Other	41.52	46.36	11.7	48.84	49.85	51.44
Trade & Services	87.94	104.18	18.5	111.59	113.90	116.65
ALL NONMANUFACTURING	190.97	217.00	13.6	223.29	224.03	229.15
ALL BUSINESS	302.50	358.80	18.6	381.59	387.01	396.82

NOTE: The source for 1983 actual spending is the U.S. Dept. of Commerce. The one exception is capital spending by the instruments industry, which has been estimated from U.S. Census data and McGraw-Hill surveys. The figures in this table represent total industry spending, and not just the spending of firms in the survey. Derivation of the projected figures is discussed in the text, under "Notes on the Survey."

TABLE II

EXPANSION VERSUS MODERNIZATION
(Percent of Capital Spending)

	ACTUAL 1983		PLANNED 1984		PLANNED 1985	
INDUSTRY	Expans.	Replace. Modern.	Expans.	Replace. Modern.	Expans.	Replace. Modern.
Iron & Steel	14	86	5	95	6	94
Nonferrous Metals	17	83	25	75	37	63
Electrical Machinery	40	60	45	55	44	56
Non-Electrical Machinery	64	36	69	31	69	31
Autos,Trucks & Parts	3	97	2	98	1	99
Aerospace	13	87	9	91	9	91
Fabricated Metals	22	78	33	67	30	70
Instruments	26	74	23	77	23	77
Stone,Clay & Glass	30	70	26	74	18	82
Other Durables	19	81	15	85	20	80
TOTAL DURABLES	31	69	32	68	32	68
Chemicals	32	68	32	68	33	67
Paper & Pulp	62	38	51	49	46	54
Rubber & Plastic	36	64	54	46	54	46
Petroleum	59	41	54	46	55	45
Food & Beverage	31	69	34	66	34	66
Textiles	17	83	31	69	35	65
Other Nondurables	48	52	49	51	48	52
TOTAL NONDURABLES	47	53	46	54	46	54
ALL MANUFACTURING	39	61	39	61	39	61
Mining	72	28	68	32	57	43

TABLE III

BUILDINGS, MOTOR VEHICLES, AND OTHER MACHINERY & EQUIPMENT

(Percent of Capital Spending)

INDUSTRY	ACTUAL 1983			PLANNED 1984			PLANNED 1985		
	Buildings	Motor Vehicles	Machinery/ Equipment	Buildings	Motor Vehicles	Machinery/ Equipment	Buildings	Motor Vehicles	Machinery/ Equipment
Iron & Steel	11	2	87	6	5	89	11	9	81
Nonferrous Metals	20	3	78	25	12	63	21	12	67
Electrical Machinery	22	1	77	20	1	79	14	1	85
Non-Electrical Machinery	23	3	74	23	3	74	23	3	74
Autos,Trucks & Parts	6	0	94	11	0	89	10	0	90
Aerospace	29	1	69	27	1	72	25	1	74
Fabricated Metals	23	3	74	18	5	77	14	4	79
Instruments	14	4	81	13	4	83	13	4	83
Stone,Clay & Glass	10	4	86	9	4	87	4	4	93
Other Durables	25	4	71	12	5	83	16	2	82
TOTAL DURABLES	19	2	79	18	3	79	17	3	80
Chemicals	14	1	85	14	1	85	13	1	86
Paper & Pulp	8	1	90	8	1	91	7	1	92
Rubber & Plastic	11	1	88	12	1	87	8	1	92
Petroleum	5	1	94	7	1	92	6	2	92
Food & Beverage	25	5	70	24	5	71	25	4	70
Textiles	10	4	86	8	1	91	8	2	91
Other Nondurables	20	2	78	18	2	80	17	2	81
TOTAL NONDURABLES	11	2	87	12	2	86	11	2	87
ALL MANUFACTURING	15	2	83	15	2	83	14	2	84
Mining	1	2	97	1	2	96	2	2	96
Railroads	8	1	91	7	1	92	9	1	89
Airlines	9	1	91	21	1	78	21	1	78
Electric Utilities	12	2	86	12	2	84	11	2	87
Gas Utilities	5	3	92	4	3	93	1	3	95
Communication & Other	6	8	86	6	9	85	5	9	86
Trade & Services	34	28	38	35	27	38	34	28	38
ALL NONMANUFACTURING	20	15	65	20	15	64	20	16	64
ALL BUSINESS	18	10	71	18	10	72	17	11	72

NOTE: Sum of percent changes may not equal 100% due to rounding.

TABLE IV

CAPACITY EXPANSION
(Index, 1967=100)

INDUSTRY	1983	1984	1985	Percent Change 1982-83	1983-84	1984-85
Iron & Steel	120	117	119	-1.2	-2.0	1.9
Nonferrous Metals	144	147	149	1.2	2.0	1.9
Electrical Machinery	268	281	288	3.9	4.7	2.5
Non-Electrical Machinery	211	227	231	4.1	3.2	1.8
Autos,Trucks & Parts	152	152	152	0.0	0.0	0.0
Other Transportation	192	211	229	5.0	9.8	8.3
Fabricated Metals/Instruments	243	264	291	7.0	8.8	10.2
Stone,Clay & Glass	186	196	198	0.2	5.2	0.8
Miscellaneous Manufacturing	179	187	197	-5.3	4.6	5.5
Chemicals	241	245	257	1.3	1.6	5.0
Paper & Pulp	184	197	207	2.3	7.1	4.8
Rubber & Plastic	174	189	208	5.8	9.2	9.7
Petroleum	140	140	140	-0.6	0.0	0.0
Food & Beverage	258	265	277	8.3	2.7	4.6
Textiles	205	208	209	1.1	1.2	0.7
ALL MANUFACTURING	197	203	210	-2.1	3.0	3.5
Gas & Electric Utilities	218	221	227	1.1	1.2	2.7
ALL INDUSTRY	201	208	215	-2.0	3.4	3.2

NOTE: Index numbers are rounded. Percent changes are based on unrounded index numbers.

TABLE V

CAPACITY - RATES OF OPERATION
(Percent)

INDUSTRY	YEAREND 1982	YEAREND 1983	POINT DIFFERENCE 1982-83	PREFERRED RATE OF OPERATION
Iron & Steel	43.0	54.3	11.3	93.2
Nonferrous Metals	64.6	94.7	30.1	97.9
Electrical Machinery	69.8	76.1	6.3	87.9
Non-Electrical Machinery	64.4	72.1	7.7	91.3
Autos,Trucks & Parts	57.5	84.3	26.8	96.3
Aerospace	71.2	87.8	16.6	92.9
Fabricated Metals	65.5	71.3	5.8	90.5
Instruments	81.2	82.1	0.9	89.8
Stone,Clay & Glass	63.7	72.9	9.2	89.3
TOTAL DURABLES	64.7	77.0	12.3	91.6
Chemicals	65.6	73.1	7.5	91.6
Paper & Pulp	82.9	91.0	8.1	98.1
Rubber & Plastic	78.8	85.1	6.3	85.9
Petroleum	71.0	73.0	2.0	92.5
Food & Beverage	74.5	81.4	6.9	96.8
Textiles	79.4	83.8	4.4	96.5
TOTAL NONDURABLES	72.9	78.5	5.6	93.3
ALL MANUFACTURING	69.1	77.8	8.1	92.5
Electric Utilities	63.1	71.2	8.1	77.3
Gas Utilities	82.6	85.9	3.3	97.8

TABLE VI

SALES EXPECTATIONS
(Billions of Dollars)

INDUSTRY	1983 ACTUAL	1984 EXPECTED	1983-84 % CHANGE
Iron & Steel	46.6	53.8	15.4
Nonferrous Metals	57.8	67.9	17.4
Electrical Machinery	156.6	169.9	8.5
Non-Electrical Machinery	179.7	203.4	13.2
Autos,Trucks & Parts	152.7	203.1	33.0
Aerospace	70.3	82.0	16.7
Fabricated Metals	121.5	139.1	14.5
Instruments	50.0	55.6	11.3
Stone,Clay & Glass	49.0	54.0	10.3
Other Durables	138.5	151.3	9.2
TOTAL DURABLES	1,022.7	1,180.2	15.4
Chemicals	190.1	208.7	9.8
Paper & Pulp	85.8	96.4	12.4
Rubber & Plastic	52.0	57.4	10.3
Petroleum	191.1	198.7	4.0
Food & Beverage	287.7	313.7	9.0
Textiles	52.3	59.4	13.6
Other Nondurables	171.2	188.6	10.2
TOTAL NONDURABLES	1,030.2	1,123.0	9.0
ALL MANUFACTURING	2,052.9	2,303.2	12.2
Mining	NA	NA	4.7
Railroads	NA	NA	10.9
Airlines	NA	NA	10.2
Electric Utilities	NA	NA	6.9
Gas Utilities	NA	NA	5.0
Communication & Other	NA	NA	1.5
Trade & Services	NA	NA	11.3

NA - Not Available
* - U.S. Department of Commerce.

TABLE VII

REAL SALES EXPECTATIONS
(Billions of 1983 Dollars)

INDUSTRY	1983 ACTUAL	1984 EXPECTED	1983-84 % CHANGE
Iron & Steel	46.6	50.3	8.0
Nonferrous Metals	57.8	60.4	4.6
Electrical Machinery	156.6	166.0	6.0
Non-Electrical Machinery	179.7	195.3	8.7
Autos,Trucks & Parts	152.7	193.9	27.0
Aerospace	70.3	78.0	11.0
Fabricated Metals	121.5	133.8	10.1
Instruments	50.0	54.0	8.0
Stone,Clay & Glass	49.0	51.7	5.4
Other Durables	138.5	144.0	4.0
TOTAL DURABLES	1,022.7	1,127.5	10.2
Chemicals	190.1	199.9	5.2
Paper & Pulp	85.8	90.5	5.5
Rubber & Plastic	52.0	54.6	5.0
Petroleum	191.1	195.3	2.2
Food & Beverage	287.7	299.8	4.2
Textiles	52.3	56.2	7.5
Other Nondurables	171.2	180.8	5.6
TOTAL NONDURABLES	1,030.2	1,077.2	4.6
ALL MANUFACTURING	2,052.9	2,204.7	7.4
Mining	NA	NA	6.5
Railroads	NA	NA	5.3
Airlines	NA	NA	4.1
Electric Utilities	NA	NA	1.4
Gas Utilities	NA	NA	0.9
Communication & Other	NA	NA	-4.8
Trade & Services	NA	NA	6.2

* U.S. Department of Commerce.
NA - Not Available.

TABLE VIII

INFLATION EXPECTATIONS
(Percentage Change)

INDUSTRY	Expected % Change, 1983-84	
	Plant & Equipment Prices	Product Prices
Iron & Steel	6.0	6.9
Nonferrous Metals	4.8	12.3
Electrical Machinery	3.9	2.4
Non-Electrical Machinery	4.1	4.2
Autos,Trucks & Parts	5.8	4.8
Aerospace	5.2	5.1
Fabricated Metals	5.9	4.0
Instruments	4.7	3.1
Stone,Clay & Glass	6.5	4.6
Other Durables	5.8	5.0
TOTAL DURABLES	4.9	4.7
Chemicals	4.5	4.4
Paper & Pulp	5.0	6.5
Rubber & Plastic	4.5	5.0
Petroleum	5.5	1.8
Food & Beverage	5.6	4.6
Textiles	5.6	5.7
Other Nondurables	7.0	4.3
TOTAL NONDURABLES	5.4	4.2
ALL MANUFACTURING	5.1	4.5
Mining	4.1	-1.6
Railroads	6.4	5.2
Airlines	6.1	5.9
Electric Utilities	6.5	5.5
Gas Utilities	5.8	4.1
Communication & Other	6.4	6.6
Trade & Services	5.7	4.9
ALL NONMANUFACTURING	5.9	5.0
ALL BUSINESS	5.6	4.8

TABLE IX

SURVEY SAMPLE SIZE

Industry	Percentage of Capital Spending Covered by Survey
Iron & Steel	19.1
Nonferrous Metals	22.1
Electrical Machinery	55.9
Non-Electrical Machinery	36.4
Autos,Trucks & Parts	77.5
Aerospace	19.6
Fabricated Metals	7.2
Instruments	83.2
Stone,Clay & Glass	13.0
Other Durables	8.0
TOTAL DURABLES	40.7
Chemicals	33.2
Paper & Pulp	49.0
Rubber & Plastic	14.6
Petroleum	56.4
Food & Beverage	31.3
Textiles	23.9
Other Nondurables	27.7
TOTAL NONDURABLES	42.3
ALL MANUFACTURING	41.6
Mining	18.6
Railroads	36.1
Airlines	57.7
Electric Utilities	57.1
Gas Utilities	26.5
Communication & Other	14.4
Trade & Services	4.9
ALL NONMANUFACTURING	19.8
ALL BUSINESS	27.8